

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

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1. (original) Method for manufacturing multiple channel membranes, wherein a solution of a polymer which forms a semi-permeable membrane after coagulation, is extruded through an extrusion nozzle wherein several hollow needles are arranged, a gas containing coagulating vapour or a coagulating liquid is injected through the hollow needles into the extruded material during extrusion, so that parallel continuous channels extending in extrusion direction are formed in the extruded material, and the outer surface of the membrane is brought into contact with coagulation agents characterized in that the outer surface of the membrane after it leaves the extrusion nozzle is first brought into contact with a mild coagulation agent such that the shape of the membrane is fixed without an active layer being formed on the outer surface of the membrane and subsequently the membrane is brought into contact with a strong coagulation agent.

2. (original) Method according to claim 1, wherein the mild coagulation agent is water vapour.

3. (previously presented) Method according to claim 1, wherein the mild coagulation agent is a liquid which is applied on the extruded material by means of an additional outlet on the circumference of the extrusion nozzle.

4. (previously presented) Method according to claim 1, further comprising providing a separating layer by coating on the surface of the membrane in the channels.

5. (previously presented) Method according to claim 1, wherein the extrusion nozzle at the circumference is provided with elevated portions, so that a membrane having recessed portions in the outer circumference extending in the extrusion direction, is obtained.

6. (currently amended) Multiple channel membrane produced by the method according to claim 1, wherein,
an active layer is arranged in the channels, [[and]]
no active layer is provided on the outer surface, and
~~with respect to the active layer in the channels so~~
that

any resistance against liquid flows is predominantly determined by the active layer.

7. (previously presented) Multiple channel membrane according to claim 6 in the form of a flat membrane having recessed portions without channels, the recessed portions extending parallel to the channels.

8. (previously presented) Multiple channel membrane according to claim 6 in the form of a cylindrical membrane having four or more channels.

9. (currently amended) Spiral-wound filtration element, comprising:

~~containing~~ one or more multiple channel membranes produced by the method according to claim 1,

each membrane in the form of a surface with channel-free recessed portions extending parallel to the channels,

the membranes wound around a central axis and having the channels running in the direction of the axis of the winding, wherein,

an active layer is arranged in the channels,

no active layer is provided on an outer surface, and


any resistance against liquid flows is predominantly determined by the active layer.

10. (canceled)

11. (previously presented) Method according to claim 2, further comprising providing a separating layer by coating on the surface of the membrane in the channels.

12. (previously presented) Method according to claim 3, further comprising providing a separating layer by coating on the surface of the membrane in the channels.

13. (previously presented) Method according to claim 2, wherein the extrusion nozzle at the circumference is provided with elevated portions, so that a membrane having recessed portions in the outer circumference extending in the extrusion direction, is obtained.

 14. (currently amended) Method according to claim 3, wherein the extrusion nozzle at the circumference is provided with elevated portions, so that a membrane ~~[[have]]~~ has recessed portions in the outer circumference extending in the extrusion direction, is obtained.

15. (previously presented) Method according to claim 4, wherein the extrusion nozzle at the circumference is provided with elevated portions, so that a membrane having recessed portions in the outer circumference extending in the extrusion direction, is obtained.

16. (currently amended) Multiple channel membrane produced by the method according to claim 2, wherein,

an active layer is arranged in the channels, ~~[[and]]~~
no active layer is provided at the outer surface, and
~~with respect to the active layer in the channels so~~
~~that~~

the active layer predominantly determines any resistance against liquid flows.

17. (currently amended) Multiple channel membrane produced by the method according to claim 3, wherein,
an active layer is arranged in the channels, [[and]]
no active layer is provided at the outer surface, and
~~with respect to the active layer in the channels so~~
~~that~~

the active layer predominantly determines any resistance against liquid flows.

18. (currently amended) Multiple channel membrane produced by the method according to claim 4, wherein,
an active layer is arranged in the channels, [[and]]
no active layer is provided at the outer surface, and
~~with respect to the active layer in the channels so~~
~~that~~

the active layer predominantly determines any resistance against liquid flows.

19. (currently amended) Multiple channel membrane produced by the method according to claim 5, wherein,
an active layer is arranged in the channels, [[and]]
no active layer is provided at the outer surface, and
~~with respect to the active layer in the channels so~~
~~that~~

the active layer predominantly determines any resistance against liquid flows.

20. (canceled)

21. (previously presented) Method according to claim 1, wherein the hollow needles are arranged within a circular extrusion nozzle so that a cylindrical multiple channel semi-permeable membrane is formed.

22. (previously presented) Method according to claim 21, wherein four or more hollow needles are arranged within the circular extrusion nozzle.

23. (previously presented) Method according to claim 1, wherein the needles are arranged in a row within a rectangular nozzle so that a flat sheet membrane is formed.

24. (previously presented) Method according to claim 5, wherein the needles are arranged in a row within a rectangular nozzle so that a flat sheet membrane having recessed portion without channels extending parallel to the channels is formed.

25. (previously presented) Method according to claim 24, further comprising the step of winding the flat sheet membrane spirally round a central axis and placing the wound membrane in a housing, to produce a spiral-wound membrane.